

CENTRAL FAX CENTER

JUN 25 2007

**REMARKS**

Claims 1 to 122 are before the Examiner. New claims 123 to 134 are added. Claims 1 to 26, 28 to 43, 53, 57 to 59, 75 and 76 have been cancelled. Claims 27, 44 to 52, 54, 55, 56 and 60 to 122 are pending. Claims 48, 54 to 56, 64 to 68, 70 to 74, 77 to 79 and 121 are amended. Applicant respectfully requests that the instant application be reconsidered in light of the above amendments and the following remarks.

**Restriction under 35 USC § 121**

Claims 27, 44 to 56 and 60 to 122 have been subjected to a restriction requirement to one of the following inventions:

Invention I: Claims 27, 44-56, 60-82 and 122, drawn to compounds, classified in class 556, subclass 53; and

Invention II: Claims 83-121, drawn to a polymerization process, classified in class 526, subclass 161.

The Office Action constructively elects Invention I based on original presentation for prosecution on the merits.

Applicant confirms the election of Invention I, with traverse.

In particular, as noted in the U.S. Patent and Trademark Office Manual of Patent Examining Procedure §803, "[i]f the search and examination of all the claims in an application can be made without serious burden, the examiner must examine them on the merits, even though they include claims to independent or distinct inventions" (emphasis added).

Applicant respectfully submits that the search and examination of all of the claims in the application can be made substantially without burden, and certainly without serious burden, since the Examiner has already searched and examined claims from both asserted Inventions I and II.

For example, present claim 105 is very similar, though slightly narrower in scope (except of course for the presence of the Ti in the genus "M") to (canceled) claim 44 of U.S. application serial no. 07/676,690. It is noted that claim 44 was searched, examined

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and allowed in the 07/676,690 application. Thus, the only outstanding issues regarding the patentability of present claim 105 should be the same as those discussed below for the product claims regarding the inclusion of Ti in the genus.

Applicant also notes that Invention II has already been searched by the Examiner for the same invention in US application serial no. 11/387,217, filed March 23, 2006. In fact, in the Office Action dated February 23, 2007, the 11/387,217 application, the Examiner states that present claims 83-121 claim "substantially the same process of polymerization" as that of claims 1-16 of the 11/387,217 application. Furthermore, in the 11/387,217 application, other than double patenting rejections, the only rejection is based on "the lost count in Interference No. 103,819," which relates to exactly the same unusual issue that is addressed in the outstanding Office Action in the present application. Thus, it makes the most sense to address this issue, with regard to Inventions I and II, both at the same time.

Thus, as claims from both Inventions I and II have already been searched and examined, and because the unusual issues with regard to patentability of both Inventions I and II should be considered at the same time, it is respectfully submitted that it would not require undue burden to examine both Invention I and II in this application. Additionally, the Examiner alleges that the inventions differ as product and process of use. Applicant respectfully submits that regardless of the classification system noted above, the Examiner will have to search the same art, for both inventions of Group I drawn to polymerization catalysts and of Group II drawn to a polymerization process, and rarely is one described without describing the other. Thus, it is more efficient and cost effective if both are searched and examined at the same time, particularly since, as discussed above, they have already been searched and examined.

Thus Applicant respectfully submits that it would not require an undue burden for the Examiner to search and examine both Inventions. To the extent that a minor additional burden would be assumed by the Examiner in withdrawing the Restriction Requirement and acting on all the claims, the possible additional adverse impact on Applicant, if the restriction is not withdrawn, is enormous. This is because any divisional application filed at this point would have a severely limited patent term. While rejoinder of the claims is assured when the claims of Invention I are eventually found to be

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allowable, if the claims were rejoined now, the claims of Invention II would be found to be allowable, or at least rejected only on grounds related to the inclusion of titanium.

For all the above reasons, Applicant respectfully requests withdrawal of the restriction requirement.

Furthermore, in the event the Examiner does not withdraw the restriction requirement, Applicant requests rejoinder of the claims under MPEP § 821.04(b).

#### Claim Objections

Claims 64, 66, 68, and 70-74 were previously objected to because Hr should be Hf. The claims have been amended to correct the typo.

#### Claim Rejections -Obviousness Type Double Patenting

Claims 48-56 and 60-63 and 64-82 were rejected as unpatentable under the judicially created doctrine of obviousness type double patenting over US 7,041,841, US 5,621,126, RE 37,788 and US 6,617,466. The rejection over US 5,621,126, and US 6,617,466 has been withdrawn.

Applicant respectfully disagrees with the above obviousness type double patenting rejections and respectfully submits that claims 48-56 and 60-63 and 64-82 are not obvious over RE37,788 and US 7,041,841 and the rejections should be withdrawn. In the instant application, the Examiner has previously agreed the two-way test for obviousness type double patenting is to be applied.

#### Obviousness-type-Double Patenting over US 7,041,841

Applicant notes that on May 23, 2005 a terminal disclaimer (copy attached) was filed in USSN 07/973,261 (now US 7,041,841) disclaiming the terminal portion of US 7,041,841 over the instant application. The doctrine of obviousness type double patenting was developed to prevent unjustified extensions of patent term. Since the instant application and US 7,041,841 will expire no later than the expiration date of the instant application and the terminal disclaimer in US 7,041,841 already requires common ownership, there is no need for another terminal disclaimer in the instant application.

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Applicant respectfully submits that the obviousness type double patenting rejection should be withdrawn.

Additionally, claims 1, 2, 3, and 5 of US 7,041,841 are directed toward symmetrically substituted (e.g.  $x = 2$  or 4) Hf and Zr compounds useful for producing polymers having greater stereoregularity. Specifically the special combination of Hf or Zr with  $x$  being 2 or 4 has an unexpected technical effect of enhanced stereoregularity in polypropylene (see column 25, line 29). This is particularly true when one considers that titanium is usually the preferred species for the instant mono-Cp catalysts. Therefore, claims 1, 2, 3, and 5 of US 7,041,841 are not obvious from the instant application. Likewise the instant application is not obvious from the claims in US 7,041,841. Claims limited to Hf and Zr do not suggest the full scope of the instant claims of Hf, Zr, and Ti, especially when one considers that Ti is not preferred for propylene catalysts. Likewise claims limited to  $x = 2$  and 4 do not suggest  $x$  of 1, 2, 3 or 4. Thus, Applicant submits that the instant application is not obvious from the claims in US 7,041,841. Since neither prong of the two-way obviousness test has been met, Applicant requests that the obviousness type double patenting rejection be withdrawn.

Furthermore, Applicant has added new claim 134, which states in pertinent part: wherein  $x$  is 0, 1, 2, 3 or 4 when M is Ti and  $x$  is 0, 1 or 3 when M is Hf or Zr. Applicant respectfully submits that claim 134 is not obvious from US 7,041,841 which only claims Hf and Zr where  $x$  is 2 or 4. Likewise US 7,041,841 is not obvious from claim 134, as the special improvement invention of  $x = 2$  or 4 when M is Hf or Zr is not disclosed or suggested by the claim. Applicant respectfully submits that 133 is not unpatentable under the judicially created doctrine of obviousness type double patenting over US 7,041,841.

Additionally, Applicant has added new claim 133, which states in pertinent part: wherein  $x$  is 0, 1, 2, 3 or 4 when M is Ti and  $x$  is 0, 1, 2 or 3 when M is Hf or Zr. ( $x$  can be 2 and not be symmetrical.) Applicant respectfully submits that claim 134 is not obvious from US 7,041,841 which only claims Hf and Zr where  $x$  is 2 or 4, with symmetrical substitution. Likewise US 7,041,841 is not obvious from claim 133, as the special improvement invention of  $x = 2$  or 4 when M is Hf or Zr is not disclosed or

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suggested by the claim. Applicant respectfully submits that 133 is not unpatentable under the judicially created doctrine of obviousness type double patenting over US 7,041,841.

Additionally Applicant notes that the doctrine of obviousness type double patenting was put in place for several reasons, two of which are to prevent unjustified extensions of the right to exclude and to prevent harassment by multiple assignees. In the instant application the three cases above are already tied together by terminal disclaimers. US 7,041,841 is already terminally disclaimed over the instant application and RE 37,788. Thus they are already bound in ties of common ownership. Further the MPEP, the Federal Circuit and Respected authorities on Patent Law have all recognized that there are situations where extension of the patent term is not unjustified (see MPEP § 804II.B.1.(b), *in re Braat*, 937 F2d. 589, 19 USPQ 2d 1289 (Fed Cir 1991)). Applicant submits that this is one of those situations. First, the administrative delay in granting the instant application was due to an interference that Applicant did not request, second, the claims in US 7,041,841 are not obvious over the instant claims. Thus Applicant respectfully submits that the ODP rejections over US 7,041,841 should be withdrawn.

Furthermore, The Examiner has also argued that "The issue is whether at least on claim of each application/patent includes at least one compound which is anticipated or obvious over at least one claim of the other application/patent." Applicant respectfully disagrees with the Examiner and requests the Examiner cite the MPEP section, statute or case law that he is relying upon to make this statement. Applicant submits that in situations such as the instant case MPEP §§ 804 paragraph II.B.1 (a)-(b) and, in particular, *In re Berg* (46 USPQ 2d 1226, Fed. Cir. 1988) are controlling precedent.

MPEP § 804 paragraph II.B.1 (b), citing *In re Berg*, clearly states: "A two-way test is to be applied only when the applicant could not have filed the claims in a single application and there is administrative delay." (Emphasis in original). Applicant has repeatedly put forward, and the Examiner has not challenged, that there is administrative delay in the instant application. Thus the only question to be addressed is whether or not the claims could have been filed in a single application. *In re Berg* is instructive in this

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area. At page 1231 Berg states : "... if an applicant can file all of its claims in one application, but elects not to, it is not entitled to the exception of the two-way test. Berg then goes on in footnote 5 to state that "For example, an applicant could have filed *all* of its claims in one application when the disclosure of the earlier filed application will support the claims in the later filed application." (46 USPQ 2d 1231, Emphasis added)

Applicant submits that it could not have filed all of its claims in one application. The specification of the instant application does not support the full scope of the claims in US 7,041,841. Specifically *symmetrical* substitution with 2 or 4 R groups, while the metal is Hf or Zr is not stated in the specification. Likewise the substitution possibilities for the R group are larger in the claims of US 7,041,841. Specifically the substituent on the substituted hydrocarbyl or metalloid can be a halogen, amido, phosphido, alkoxy, or any other radical containing Lewis acidic or basic functionality, where as in the instant application only a halogen is listed. The same is true for the R' group on the heteroatom J. R' in US 7,041,841 can be a C1 to C20 hydrocarbyl, or a C1 to C20 hydrocarbyl substituted with a halogen, amido, phosphido, alkoxy, or any other radical containing Lewis acidic or basic functionality, while in the instant application R' can only be a C1 to C20 hydrocarbyl, or a C1 to C20 hydrocarbyl substituted with a halogen.

Thus Applicant respectfully submits that it could not have filed all of its claims in one application and thus should not be required to submit a terminal disclaimer.

The Examiner has previously noted that dimethylsilyl bridged tetramethylated cyclopentadienyl hafnium or zirconium compounds are present in the examples of instant application, and has suggested that such is sufficient to require a terminal disclaimer over US 7,041,841. As noted above Berg requires that the full claim scope be supported by the instant application. Applicant respectfully requests that the rejection requiring a terminal disclaimer over US 7,041,841 be withdrawn.

However in the event the Examiner disagrees, as a compromise, Applicant submits that it is willing to submit a re-issue application of US 7,041,841 limiting the claims to fluorenyl compounds. Would this assist the Examiner in his analysis of the instant claims?

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Obviousness-type-Double Patenting over RE 37,788

RE 37,788 is directed toward specific catalyst compounds having the ability to produce ethylene alpha -olefin copolymers of high molecular weight with high levels of alpha-olefin comonomer incorporation and at high levels of catalyst productivity (see col. 1, lines 40-47 of '126). Specifically catalyst compounds having an R' group that is a 1° or 2° carbon atom bonded to the J atom have an *unexpected technical effect* of achieving high levels of alpha-olefin comonomer incorporation at high molecular weights. As evidence of this unexpected effect please see Table 1 in RE 37,788. Specifically, when we compare examples 80 to 82 and 77 to 79, we see that the comonomer incorporation is significantly greater, when a 1° or 2° carbon is bonded to J versus a 3° carbon, and the molecular weights are increased. Normally in coordination polymerization one expects that high comonomer content depresses molecular weight and vice versa. It is highly unusual that one could get both high comonomer and high molecular weight at the same time. This also has the production benefit that one needs less comonomer in the reactor to produce a same density product as previous catalyst. This could result in significant monetary savings. This specific combination is neither disclosed nor suggested in the instant claims. Therefore the claims in RE 37,788 are not obvious from the instant claims.

Furthermore, please note that US 5,055,438 is listed on the face of US 5,612,126 and its reissue RE 37,788 as having been considered by the Examiner and found to NOT make the inventions claimed therein obvious. The instant application is a divisional of US 5,055,438 and thus has the SAME specification. If the USPTO has found the claims of US 5,612,126 and its reissue RE 37,788 patentable over the entire disclosure of US 5,055,438, then it logically follows that US 5,612,126 and its reissue RE 37,788 are patentable over the instantly claimed invention. Thus, Applicant respectfully submits the obviousness type double patenting rejection should be withdrawn.

Additionally the Examiner has stated in his Advisory Action dated 5/16/2007 that the claims in RE 37,788 are not properly supported for Hf and Zr complexes. Applicant respectfully disagrees and submits that this line of reasoning amounts to a lack of enablement argument for the claims in RE37,788. This sort of argument is not allowed in obviousness type double patenting situations. For a proper analysis under ODP, we must

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take the claims at their face value, and the face value of the claims in RE 37,788 is that they have been examined twice and found patentable. Furthermore the claims in US 5,612,126 (now RE 37,778) were rejected under the doctrine of obviousness type double patenting over the instant application and that rejection was withdrawn by that Examiner and the claims allowed. Applicant submits that the Patent Office should now be estopped from claiming that the claims in RE 37,778 are not patentably distinct over the instant application, when it has found so *twice*. Full faith and credit should be extended to the prior examiner and his decisions.

Additionally Applicant notes that the doctrine of obviousness type double patenting was put in place for several reasons, two of which are to prevent unjustified extensions of the right to exclude and to prevent harassment by multiple assignees. In the instant application the three cases above are already tied together by terminal disclaimers. US 7,041,841 is already terminally disclaimed over the instant application *and* RE 37,788. Thus they are already bound in ties of common ownership. Further the MPEP, the Federal Circuit and respected authorities on Patent Law have all recognized that there are situations where extension of the patent term is not unjustified (see MPEP § 804II.B.1.(b), *in re Braat*, 937 F2d. 589, 19 USPQ 2d 1289 (Fed Cir 1991)). Applicant submits that this is one of those situations. First, the administrative delay in granting the instant application was due to an interference that Applicant did not request, second, the claims in RE 37,788 have already been found to be not obvious over the instant claims.

The Examiner has previously argued that the specification recommend species in Table 1 that would be 1° or 2° carbon atoms when selected and attached to J, and thus the ODP rejection should be maintained. Applicant respectfully disagrees. Applicant's specification may NOT be used against the Applicant when making an ODP analysis. On rare occasion it may be acceptable to look to a "tangible embodiment" for assistance in determining what is covered by the claims (see *In re Vogel*, 164 USPQ 2d 619) but the specification may not be used as prior art against Applicant's claims. None of the compounds actually made in RE 37,788 have 1° or 2° carbon atoms attached to nitrogen. Thus, there is no tangible embodiment for the Examiner to look to. Applicant

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respectfully submits that by pulling bits and pieces from different parts of the specification ( e.g. R' is bound to a 1° or 2° carbon atom, J is nitrogen, etc.) and then using the claims as a map to put them together, the Examiner is using the specification as prior art and such is forbidden. In re Vogel only allows the use of tangible embodiments within claims, not something picked and chosen, or jury rigged from the specification.

Furthermore as discussed above, Applicant submits that in situations such as the instant case MPEP §§ 804 paragraph II.B.1 (a)-(b) and, in particular, In re Berg (46 USPQ 2d 1226, Fed. Cir. 1988) are controlling precedent. In re Berg, asks two questions. First has there been administrative delay and second could an applicant "...have filed *all* of its claims in one application when the disclosure of the earlier filed application will support the claims in the later filed application." (In re Berg, at 1231, FN 5, emphasis added). In the instant application the Examiner has previously agreed there has been administrative delay. In answer to the second question, Applicant submits that all of its claims could not have been filed in the same application, because they are not fully supported by the instant specification. The requirement that "...R' is covalently bonded to the nitrogen group through a 1° or 2° carbon atom" is not stated in the instant specification. Applicant submits that if the such language were amended into the instant specification, the instant Examiner would make a new matter rejection. Since, one of the key points of the patentability of the claims in RE 37,788, (the 1° or 2° carbon atom attached to nitrogen), is not supported herein, Applicant submits that the claims could not have been filed in the same application. Under In re Berg, this indicates the obviousness type double patenting rejection should be withdrawn.

In light of all of the above discussion, Applicant respectfully submits that the ODP rejections over RE 37, 788 should be withdrawn.

#### Rejection under 35 USC § 102(e)

Claims 64, 66 and 68 were rejected under 35 USC § 102(e) as being anticipated by Example 1 of Tomotsu (US 5,276,117). The Rejection was withdrawn.

Rejection Over The Lost Count In Interference 103,819

Claims 48-50, 53-56, 61, 63-65, 67-75, and 77-82 were rejected under 102(g) over the lost count in the 103,819 interference. The rejection has been withdrawn.

Claim Rejections Under 35 USC § 103(e)

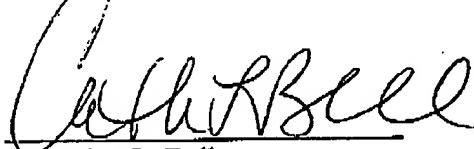
Claims 64-69 and 122 were rejected under 35 USC § 103(a) as anticipated by Examples 2 to 12 of Campbell (US 5,045,517). The rejection has been withdrawn.

Accordingly, Applicant respectfully requests the rejections to the claims be removed, and the claims, as amended, be passed to allowance.

Please charge any deficiency in fees or credit any overpayments during the entire pendency of this case to Deposit Account No. 05-1712. Please also charge any petition fees, including fees for extensions of time necessary for the pendency of this case or copendency of this application with another application at any time to Deposit Account No. 05-1712.

Respectfully submitted,

June 25, 2007  
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